



The Ferrum Nature Society Bulletin

Dedicated to the appreciation and conservation of our natural world

Editors: Todd Fredericksen tfredericksen@ferrum.edu
Nell Fredericksen nfredericksen@ferrum.edu

Volume 5, Issue 7

July 2007

Nature's events:

Hot, hot, hot! July is the warmest month of the year for our area, on average, just over a degree warmer than August. Average maximum temperature is 86.5°F and the average minimum is 63.8°F. Rainfall averages 4.8 inches, which is often associated with thunderstorms.

July is a good month to encounter **young snakes**. Mulch piles and hay bales are good nesting areas for many snake species and the warm mid-summer sun provides good incubation conditions.

Sky calendar:

Full moon - July 29, called the "thunder moon" or "grain moon".

Planets - Mars is just below the moon in the early morning hours. Venus and Saturn are low in the West at twilight. Look for the bright Jupiter higher in the southern sky this month near the bright red giant star Antares. Mercury is the east-northeast just before sunrise.

Attack of the snakehead fish! Charles Facchina

In the spring of 2002, Maryland fishermen caught several strange fish in a small pond in Crofton Maryland. The Department of Natural Resources (DNR) identified the fish as *Channa argus*, or the Northern Snakehead. Officials became concerned about the potential environmental impact this that top level predator might have on native aquatic species. There was also concern about the Snakehead population possibly spreading into the nearby Little Patuxent River. In 2000, there were several reports of Northern Snakehead in Florida waterways. Individuals also had been reported in California and Massachusetts.

The Northern Snakehead fish is native to China with 28 different species of snakeheads throughout southeast Asia. They are often used in rice paddies for pest control and as a source of meat for farmers. They are able to tolerate water with low oxygen and can even survive out of water for several days while they wriggle towards a new body of water. The Northern Snakehead grows up to 3 ft with a long cigar-shaped body and a protruding lower jaw filled with sharp teeth. They have long dorsal and anal fins. It can be confused with the native Bowfin (see below). Adults are normally dark brown with black blotches, while the young are a golden color. Adults reach sexual maturity in about two years. Females produce up to 1500 eggs each spawning period and can spawn up to 4 times in a year. They are adaptable fish and can even survive in water that is covered in ice. The

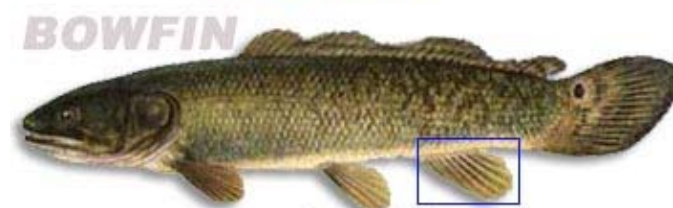
young feed on small invertebrates and larvae, while the adults mainly feed on other fish as well as reptiles, birds, and small mammals. Northern Snakeheads are extremely aggressive predators.

In Maryland, the DNR scientists decided that the population of Northern Snakeheads in the pond needed to be exterminated. They used a combination of Glyphosate (Roundup®) to kill the vegetation that might hide any Snakeheads and Rotenone to eliminate the Snakeheads. The scientists discovered another mature adult and one-hundred young. The DNR is replacing any native species that were killed and returning the pond back to its natural state. Since the incident in Crofton, DNR officials have tracked the source of the Northern Snakeheads back to an individual who had bought them at an Asian live seafood market. They were kept as pets until being released into the pond.

Federal and state laws have now been changed, making it illegal to possess or transport a live Northern Snakehead in the U.S. In 2004, over a dozen Northern Snakeheads have been caught in the Potomac River and its tributaries in Virginia and Maryland. These fish pose a major threat to the diversity of our native aquatic habitats. Officials from The Department of Natural Resources and the Department of Game and Inland Fisheries in Virginia are asking anglers who catch a Snakehead not to release it, but to kill it and report it.



Note long anal fin



Note short anal fin

Photo by USGS

NCWRG

A mid-summer jewel

Jessica Scott



Photo by Jessica Scott

One invertebrate that is seen only in warm weather is the Ebony Jewelwing Damselfly (*Calopteryx maculate*). The genus name *Calopteryx* means "beautiful wing" in Latin, which is very fitting for this invertebrate. This damselfly is a member of the family Calopterygidae, which includes all broad-winged damselflies. As pictured, this damselfly is known for its beautiful black wings and neon green- (or sometimes blue-) shaded body which indicates it is a male; the female has dark brown wings with white tips while the body is usually bronze.

The Ebony Jewelwing Damselfly is found along the banks of freshwater streams near forests located in eastern parts of the United States between the months of June and August. It feeds on aphids and gnats, as well as other small insects. For reproduction, the female requires submergent vegetation to lay her eggs. She can lay up to 600 eggs by inserting her stomach into the water and placing her eggs on the leaves or stems of the submerged plant. While the female is laying eggs, the male is on standby near the female to protect her from other males and insects who might try to interfere with this process. As the larval damselflies grow in the water, they feed on other larval forms of insects. The offspring will not become damselflies until the earliest part of the next summer in which they will molt and emerge from the water to fly for the first time.

Eastern red bat

Todd Fredericksen

The eastern red bat (*Lasiurus borealis*) is one of the most common bats in Virginia, but it is often unnoticed due to its tree-roosting habit and its ability to camouflage itself among dead leaves in the forest canopy. It is about 3-5 inches long and recognized by its long silky fur. Up close, red bats are easy to identify and one may find them swooping inside the Ferrum College dorms (I removed one from Bassett Hall in 2005).

The red bat ranges throughout midwestern and eastern states in the U.S. It is a migratory species, but its migratory range is still poorly understood. This is one of the first bats to emerge in the evening, where it often hunts for insects in the company of other bat species in open fields and near streetlights in towns. During the day, red bats will find a solitary roost in trees, often hanging by one foot.

Female red bats typically produce between 2-4 young per year and the young are weaned quickly and can fly in as little as three weeks. May the flying insect world beware!



Keeping a face turned towards the sun.....

- Nell Fredericksen



Sunflowers, natives of North America, consist of 67 species in the genus *Helianthus*. These are tall regal flowers, growing to heights that range from 4 to 15 feet. They are characterized by 1-4 large heads that have a central burgundy to black disk made up of numerous individual florets - each one producing a "sunflower seed". The outer ray florets (the petals) are sterile.

The sunflower gets its name from two characteristics of the flower - the flower head happens to look very much like a sun, and it exhibits heliotropism. Heliotropism is a diurnal movement of a plant in response to the position of the sun, with movement tracking from east to west.. This movement is controlled by motor cells within the plant. In the sunflower, these cells are located in the pulvinus, a flexible section of the stem. These cells respond to sunlight by pumping potassium ions into nearby tissues thus increasing turgor pressure and effecting a change in position of the flower.

Even though the sunflower is a native wildflower, it has been cultivated since around 2300 BC by both native Americans and central and south American cultures. Cultivation is now worldwide and has many uses such as birdseed, a great tasting snack to eat alone or on salads, and a source of sunflower oil. The plants are also used in livestock feed and as a source of biodiesel. The plant also produces latex and is under investigation now as a source of hypo-allergenic rubber.

The sunflower is very symbolic as well. It is the symbol of the Incan sun god as well as that of the Vegan Society. It is also used as a symbol of remembrance for Holocaust victims. The NY Sunflower project remembers victims of Sept.9/11.

This flower's regal beauty cannot be ignored.



Become a Master Naturalist! - Training will begin in Franklin County on August 2. Check out the following web site for more information on our local chapter:

<http://home.earthlink.net/~brfal.vmnp/>